

REPORT ON STEAM TURBINE MACHINERY.

No. 10466
-7 JUN 1929

pt. 4a.

Received at London Office

Date of writing Report 14-5-1929. When handed in at Local Office 19 Port of Rotterdam
No. in Survey held at Flushing & Kumpen 1-12-1927 Used Date, First Survey 1-12-1927 Last Survey 16-5-1929
Reg. Book. on the Steel Screw Steamer "TJIBADAK" (Number of Visits 54.)


Built at Kumpen 2 Yssel By whom built P. A. Giesse & Zoonen Schiedamsward No. 584 When built 1929
Engines made at Flushing By whom made Hon. M. "De Schelde" Engine No. 343 When made 1929
Boilers made at Flushing By whom made Hon. M. "De Schelde" Boiler No. 101.66.69-70 When made 1929
Shaft Horse Power at Full Power 4000 Owners Java China Japan Lyn Port belonging to Batavia
Nom. Horse Power as per Rule 928 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which Vessel is intended

STEAM TURBINE ENGINES, &c.—Description of Engines. Parsons type

No. of Turbines Ahead 2 Direct coupled, single reduction geared to One propelling shafts. No. of primary pinions to each set of reduction gearing 2
Astern 2 double reduction geared
Direct coupled to Alternating Current Generator phase periods per second rated Kilowatts Volts at revolutions per minute;
for supplying power for driving Propelling Motors, Type
rated Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

TURBINE LADING.	H.P.			I.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	1' 1/8"	16 1/4"	4	/	/	/	2"	2' 7/8"	4	HP		
2ND "	1' 1/2"	17 1/2"	4				2' 1/8"	2' 8 1/4"	4	2"	2' 6 1/8"	1
3RD "	1' 3/16"	18 1/8"	4				3' 3/8"	2' 9 1/4"	4	3"	2' 8 1/8"	1
4TH "	2' 1/8"	19 1/4"	4				2' 9/16"	3' 7 1/8"	2	LP		
5TH "	3"	20 1/2"	4				3' 3/8"	3' 8 1/16"	2	1' 7/8"	3' 6 1/8"	1
6TH "							4' 1/16"	3' 10 3/8"	2	1' 7/8"	3' 6 1/8"	1
7TH "							5"	4' 0"	1	2' 1/8"	3' 7 1/8"	1
8TH "	1' 1/8"	2' 5 1/8"	1				5' 1/16"	4' 1 1/8"	1	1' 7/8"	3' 11 1/4"	2
9TH "	1' 7/8"	2' 6 1/8"	1				7"	4' 4"	3	2"	3' 1"	2
10TH "										3"	3' 3"	6
11TH "												
12TH "												

Shaft Horse Power at each turbine { H.P. 1000 I.P. 3420 L.P. 2360
Revolutions per minute, at full power, of each Turbine Shaft { 1st reduction wheel 414 main shaft 88
Rotor Shaft diameter at journals { H.P. 5 1/2" I.P. 4" L.P. 4" Pitch Circle Diameter { 1st pinion 8,114" 1st reduction wheel 67,048" 2nd pinion 11,561" main wheel 101,485"
Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 1039.5 mill 2nd pinion 1040 mill 1st reduction wheel 1039.5 mill main wheel 1144.5 mill
Flexible Pinion Shafts, diameter { 1st 120 mill 2nd 170 mill Pinion Shafts, diameter at bearings { External 1st 125 mill 2nd 145 mill Internal 1st 125 mill 2nd 145 mill
Wheel Shafts, diameter at bearings { 1st 300 mill 2nd 400 mill diameter at wheel shroud, { 1st 606.5-580 mill 2nd 563.5-430 mill
Intermediate Shafts, diameter { as app. 370 mill as fitted 370 mill Thrust Shaft, diameter at collars { as app. 390 mill as fitted 390 mill
Screw Shaft, diameter { as app. 410 mill as fitted 410 mill tube { shaft fitted with a continuous liner { Yes
Thickness between bushes { as app. 12 1/2 mill as fitted 12 1/2 mill If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner One length If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive No
Other appliance fitted at the after end of the tube shaft No Length of Bearing in Stern Bush next to and supporting propeller 1640 mill
Propeller, diameter 18' 1/2" Pitch 16' 2 1/8" No. of Blades 4 State whether Moveable No Total Developed Surface 103.3 square feet
Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Yes Can the H.P. or I.P. Turbine exhaust direct to the condenser Yes No. of Turbines fitted with astern wheels 2 Feed Pumps { No. and size 2 à 9 1/2 x 12 x 24" 2 à 9 1/2 x 7 x 21" How driven Steam
Pumps connected to the Main Bilge Line { No. and size One à 10 1/2 x 12 x 21" 2 à 10 1/2 x 12 x 12" How driven Steam
Ballast Pumps, No. and size One à 10 1/2 x 12 x 12" Lubricating Oil Pumps, including Spare Pump, No. and size 2 à 10 1/2 x 9 x 18"
Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room 2 à 80 mill 2 à 125 mill 1 in Tunnel well à 60 mill
Holds, &c. 2 in No. 1 hold à 80 mill 2 in No. 2 hold à 80 mill 2 in spare bunker à 60 mill 2 in No. 3 hold à 80 mill 2 in No. 4 hold à 80 mill One in cofferdam between frame 54-55. One in cofferdam between frame 64-65. and 73-74. One in cofferdam between frame 92-93 55 & 93 Port all 50 mill
Main Water Circulating Pump Direct Bilge Suctions, No. and size One à 100 mill Independent Power Pump Direct Suctions to the Engine Room
Bilges, No. and size 2 à 125 mill Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes
Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both
Are they fitted sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line Above
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate No but as per drawing specification a one piece steel double blind plate has been fitted
What pipes pass through the bunkers None Have they been tested as per rule
What pipes pass through the deep tanks None
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from upper platform

11744 

Oil

Working Pressure 256 lbs

Yes

No

If so, is a report now forwarded?

26-9-24
24-8-24
15-2-28

Main Boilers. 25-10-24 Auxiliary Boilers

Donkey Boilers.....

General Pumping Arrangements 11-10-28, 19-11-27

Oil Fuel Burning Arrangements 8-2-29

Spare Gear. State the articles supplied:— 1 H P reduction pinion shaft with half coupling. 1 L P reduction pinion shaft with half coupling. 1 toothwheel 1st red. 1 set of for H P & L P rotor, pinions, 2nd reduction and mainwheel. One set of pads for main thrust block. One set of turbine thrust blocks complete. One set of cotings for thrust blocks. One set of packing for each turbine gland. 3 sprayer. 4 bolts and nuts for each rise of rotor bearings. 4 bolts and nuts for each H P and L P pinion shaft bearings also for main shaft bearings. One set of coupling bol. One propeller shaft One propeller. One twentieth of total number of bolts and nuts for each gear can joint. One twentieth of total number for each turbine casing joint. Six thermometer for oil circulating system. 1 set of valves for each feed pump and for each bilge pump. escape valve of each rise. A quantity of assorted bolts and nuts and several bars and plates of steel. A complete set of spare gear for each auxiliary engine.

The foregoing is a correct description,

N. V. KON. MY. "DE SCHELDE"

N. V. KON. MY
Jan. 1911

DE SCHELDE"
H. P. Kesseler

Manufacturer

Dates of Survey while building	During progress of work in shops - -	1921 1/2 1922 3/1 6/12 23/12 13/1 28/1 18/2 16/3 24/3 6/4 23/4 24/5 28/5 3/6 13/6 23/6 28/6 29/6 3/7 5/7 25/7 1/8 12/8 23/8 24/8 1929 11/1
	During erection on board vessel - - -	1922 14/9 24/11 1929 11/1 24/1 7/2 26/2 28/2 1/3 29/3 4/4 10/4 13/4 14/4 14/4 26/4 29/4 5/5 10/5 17/5 1/6
	Total No. of visits	54

Dates of Examination of principal parts—Casings ^{6/24 14 25 12 17 1} 6-18-9/10/11/12/1 Rotors ^{28 10 10 24 24 5 1 12} 10-14-15/5/8/10/11/11 Blading ^{11 22 17 14 8 1 2 1 1 1 14} 11/11/11/12/14/11/12/15/13 Gearing ^{31 6 17 23 13 8 10} 11/18/12/12/15/14/12
Wheel shaft ^{17 13 18 16} 17-13-18-16 Thrust shaft 25-10-28 Intermediate shafts 25-10-28 Tube shaft L Screw shaft ^{28 14 12 11} 25-9-28

Propeller 25 - 9 - 29 Stern tube $\frac{3}{4}$ - $\frac{28}{13}$ - $\frac{24}{8}$ - 28 Engine and boiler seatings 28 - 0 - 28 Engine holding down bolts 26 - 4 - 29

Completion of pumping arrangements 10-5-29 Boilers fixed 18-2-29. Engines tried under steam 16-5-29

Main boiler safety valves adjusted 10 - 5 - 29 Thickness of adjusting washers $S'BF_{\frac{1}{2}}$ $S'BA_{\frac{1}{2}}$ $PF_{\frac{1}{2}}$ $PA_{\frac{1}{2}}$

Rotor shaft, Material and tensile strength *SM. Steel. 34.5 Tensure strength* Identification Mark

<i>LLOYD</i>
<i>Nº 1826</i>
<i>HK. 11.3.48</i>

Flexible Pinion Shaft, Material and tensile strength *J. M. Heel 40 Pins per inch* Identification Mark

440 v.ols
440 v.ols
44.8-12.2
440 v.ols

Pinion shaft, Material and tensile strength	S. M. Steel	41.75 tons per sq. in.	Identification Mark	EX 3413 JL 7-1-28
Pinion shaft, Material and tensile strength	S. M. Steel	35.5 tons	Identification Mark	220 lbs. 220 lbs.

Wheel shaft, Material S. M. Steel Identification Mark 640Y051
NE 1531
VS-30-11-21 Thrust shaft, Material S. M. Steel Identification Mark 04-3671-1
JL-19-1122

Intermediate shafts, Material S.M. Steel Identification Marks MB 1104-86-89-86
10-12.17-12-12.17 Tube shaft, Material L Identification Marks L

Screw shaft, Material	S. M. Steel	Identification Marks	<div style="border: 1px solid black; padding: 2px;"> 22043 22743 14.9.1.20 </div>	Steam Pipes, Material	Solid drawn steel	Test pressure	450 lb.
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Date of test 29-30/4 5/- 29 Is an installation fitted for burning oil fuel Yes
 Have the requirements of the Rules for carrying and burning oil fuel been complied with Yes

Is this machinery a duplicate of a previous case No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery has been made*

in accordance to the Societies Rules approved plans and Secretary.

Letter material tested as required and workmanship good. The

whole installation was found in a good working condition

during a trial trip on the North Sea and I am of opinion that

this vessel is eligible to be recorded in the Society's Register

Book with * LMC 5-29 OC. WATERTUBE BOILERS. fitted for oilfuel.

This vessel ~~has~~ run aground when launched, screw shaft drawn, lines found

damaged, ~~span~~ draft fitted. Hemitube museller and fastenings good.

The amount of Entry Fee ☒ 42.00 When applied for, ☒ *m*

Special	...	£	1456.80	23/5 1920	Y. Y. School
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Damage
Donkey Boiler Fee ... £ 50.00
When received, 1506-80 to 13/6/24 Sh.
Engineer's Receipt to Lloyd's Register of Shipping.

Travelling Expenses (if any) *✓* *305.00* *457* *649* *15/7/29 HWS* */* */*

Committee's Minute

Committee's Signature _____

Assigned 7 Dec 5:29 Lt F.D.

Filed for Oil Incl 3.29 F.R. above 1500 ft

CERTIFICATE WRITTEN.